



הוצאת ספרים ע"ש י"ל מאגנס - האוניברסיטה העברית - ירושלים

THE MAGNES PRESS · THE HEBREW UNIVERSITY · JERUSALEM

ISRAEL **Journal of** **MATHEMATICS**

Volume 79

1992



הוצאת ספרים ע"ש י"ל מאגנס • האוניברסיטה העברית • ירושלים

THE MAGNES PRESS • THE HEBREW UNIVERSITY • JERUSALEM

Publishers of the Following Mathematics Journals

ISRAEL JOURNAL OF MATHEMATICS

JOURNAL D'ANALYSE MATHÉMATIQUE

General Editorial Board

A. DVORETZKY H.M. FARKAS H. FURSTENBERG

A. PAZY S. SHELAH J. YAHAV R. YARON

ISRAEL JOURNAL OF MATHEMATICS

Editorial Board

A. Lubotzky

Editor-in-Chief

The Hebrew University of Jerusalem

D. Aharonov

Technion — Israel Institute of Technology

N. Alon

Tel Aviv University

S.A. Amitsur

The Hebrew University of Jerusalem

S. Gelbart

The Weizmann Institute of Science

M. Jarden

Tel Aviv University

G. Kalai

The Hebrew University of Jerusalem

Y. Kannai

The Weizmann Institute of Science

J. Lindenstrauss

The Hebrew University of Jerusalem

R. Livné

The Hebrew University of Jerusalem

M. Magidor

The Hebrew University of Jerusalem

L.H. Rowen

Bar-Ilan University

I. Vaisman

University of Haifa

B. Weiss *The Hebrew University of Jerusalem*

Executive Editor

P. Greenberg

Editorial Secretary

E. London

Four volumes of the Israel Journal of Mathematics are to be published in 1992,
Vols. 77, 78, 79, and 80

under the auspices of The Ministry of Science and Technology

Subscriptions should be addressed to The Magnes Press, P.O.B. 7695, Jerusalem 91076 Israel. Subscription fees per volume, U.S.\$60.00 + \$5.00 postage & handling (\$240.00 + \$20.00 postage & handling for the 4 vols.). Price of a single issue, U.S.\$25.00 + \$2.00 postage & handling. Individual members of mathematical societies may subscribe at a 50% discount.

ISRAEL JOURNAL OF MATHEMATICS

TABLE OF CONTENTS, VOLUME 79, 1992

APTER, A. W. <i>On the class of measurable cardinals without the axiom of choice</i>	367
ARIAS-DE-REYNA, J. AND L. RODRIGUEZ-PIAZZA <i>Finite metric spaces needing high dimension for Lipschitz embeddings in Banach spaces</i>	103
BAGGETT, L. AND K. MERRILL <i>Smooth cocycles for an irrational rotation</i>	281
BARNETTE, D. W. <i>Closed 2-cell embeddings in the projective plane</i>	161
BARNETTE, D. W. <i>3-Trees in polyhedral maps</i>	251
BOURGAIN, J. <i>A remark on the behaviour of L^p-multipliers and the range of operators acting on L^p-spaces</i>	193
BURKE, M. R. AND S. SHELAH <i>Linear liftings for non-complete probability spaces</i>	289
DUGAS, M. AND J. IRWIN <i>On thickness and decomposability of abelian p-groups</i>	153
FERES, R. <i>Connection preserving actions of lattices in $SL_n(\mathbf{R})$</i>	1
FRIEDLANDER, L. <i>On the second eigenvalue of the Dirichlet Laplacian</i>	23
GLUSKIN, E. D., N. TOMCZAK-JAEGERMANN AND L. TZAFRIRI <i>Subspaces of l_p^N of small codimension</i>	173
HRUSHOVSKI, E. <i>Strongly minimal expansions of algebraically closed fields</i>	129
IRWIN, J. <i>See M. DUGAS</i>	
KALIKOW, S., Y. KATZNELSON AND B. WEISS <i>Finitarily deterministic generators for zero entropy systems</i>	33
KATZNELSON, Y. <i>See S. KALIKOW</i>	
LUST-PIQUARD, F. <i>A Grothendieck factorization theorem on 2-convex Schatten spaces</i>	331
MERRILL, K. <i>See L. BAGGETT</i>	
ORNSTEIN, D. AND B. WEISS <i>Subsequence ergodic theorems for amenable groups</i>	113
PAYÁ, R. <i>A counterexample on numerical radius attaining operators</i>	83
RODRIGUEZ-PIAZZA, L. <i>See J. ARIAS-DE-REYNA</i>	

RUBIN, B. <i>The inversion of fractional integrals on a sphere</i>	47
SARKARIA, K. S. <i>Tverberg's theorem via number fields</i>	317
SHELAH, S. <i>See</i> M. R. BURKE	
SPINAS, O. <i>Iterated forcing in quadratic form theory</i>	297
STROTH, G. <i>Strong quadratic modules</i>	257
TALAGRAND, M. <i>Sudakov-type minoration for Gaussian chaos processes</i>	207
TOMCZAK-JAEGERMANN, N. <i>See</i> E. D. GLUSKIN	
TZAFRIRI, L. <i>See</i> E. D. GLUSKIN	
VAN MALDEGHEM, H. AND R. WEISS <i>On finite Moufang polygons</i>	321
WARD, T. B. <i>The Bernoulli property for expansive \mathbb{Z}^2 actions on compact groups</i>	225
WEISS, B. <i>See</i> S. KALIKOW	
WEISS, B. <i>See</i> D. ORNSTEIN	
WEISS, R. <i>See</i> H. VAN MALDEGHEM	